

# **Notice of Allowability**

**Application No.**

10/769,923

**Examiner**

DeWanda Samuel

**Applicant(s)**

OH, KWANG-HO

**Art Unit**

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--  
All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 03 December 2007.
2. ☒ The allowed claim(s) is/are 1-17.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☒ SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☒ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## **Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

## DETAILED ACTION

### *Response to Amendment*

1. This communication is responsive to communication received on 12/03/2007.
2. Claims 1-17 are pending.

### *Allowable Subject Matter*

3. The following is an examiner's statement of reasons for allowance: Shiota discloses having a LSR ( label switching router, column 8 line 55-56) , a header controller 7 and label processing unit 9. Shiota et al. further discloses output channel information ( column 13 line 23-67). Yoon et al. discloses having LSR (label switching router ) system Of an MPLS network . Yoon further discloses TSAR channel identifier, a channel handle attached to egress connection information. In addition Yoon discloses the egress channel are registered in lookup memory. The prior art fails to anticipate or render obvious the following recited features: Claims 1 limitations : (Currently Amended) A label switching router having an internal channel share function over an asynchronous transfer mode, comprising: an ingress forwarding engine adapted to set up a label switched path by using a signaling protocol, extract an egress forwarding engine number of an egress forwarding and an egress channel identifier that identifies an egress channel, allocate an extension tag that comprises said egress forwarding engine number and said egress channel identifier, search a previously-set internal channel that connects the ingress forwarding engine to the

egress forwarding engine, form a forwarding information base/label information base that comprises the extension tag and a previously-set internal channel identifier that identifies said previously-set internal channel, add a header having the previously-set internal channel identifier and the extension tag to a received Internet Protocol (IP) packet by referring to the forwarding information base/label information base, and forward the IP packet; and a merging unit adapted to receive label switched path set information from a peer the ingress forwarding engine, form an extension information base/merging table [[where]] wherein the egress channel identifier is mapped to [[an]] the extension tag, perform merging [[when]] upon receiving [[an]] the IP packet having the extension tag, extract the extension tag, map the extension tag to the egress channel identifier, and forward the IP packet to art the egress channel.

The prior art fails to anticipate or render obvious the following recited features:  
Claims 9 limitations; (Currently Amended) A method [[for]] of sharing [[an]] a previously-set internal channel by using a label switching router over an asynchronous transfer mode, the method comprising: setting up a label switched path by using a signaling protocol, extracting an egress forwarding engine number that identifies an egress forwarding engine and [[a]] an egress channel identifier that identifies an egress channel, allocating an extension tag that comprises the egress forwarding engine number and the egress channel identifier, and forming a forwarding information base/label information base by using [[a]] the previously-set internal channel by an ingress forwarding engine,

the previously-set internal channel connecting the ingress forwarding engine to the egress forwarding engine; adding a header comprising the extension tag and a previously-set internal channel identifier that identifies said previously-set internal channel to a received Internet Protocol (IP) packet by referring to the forwarding information base/label information base, and forwarding the IP packet by the ingress forwarding engine; receiving label switched path set information from the ingress forwarding engine, and forming an extension information base/merging table where an egress channel identifier is mapped the extension tag at a merging unit; and forwarding [[a]] the received IP packet having the extension tag to the egress channel by referring to the extension information base/merging table at the merging unit.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### ***Prior Art***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kompella ( US Patent 7,136,374) discloses having transport networks supporting virtual private networks and configuring such networks.

Ikeda et al. ( US Patent 6,711,167) discloses having an ATM communication apparatus controlling method, ATM communication apparatus and recording medium therefore.

Hughes et al. (US Patent 6,512,744) discloses having an virtual-channel merging


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DeWanda Samuel whose telephone number is (571) 270-1213. The examiner can normally be reached on Monday-Thursday 8:30-5:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DeWanda Samuel  
02/09/2008



RICKY Q. NGO  
SUPERVISORY PATENT EXAMINER